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| 8 | (310) 826-7474 - Telephone (310) 826-6991- Facsimile | Description Cosposation |
| 9 | Attorneys for Plaintiff | |
| 10 | Oyster Optics, LLC. | |
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| 12 | UNITED STAT | TES DISTRICT COURT |
| 13 | NORTHERN DIS | STRICT OF CALIFORNIA |
| 14 | | |
| 15 | OYSTER OPTICS, LLC, | Case No. |
| 16 | Plaintiff, | 4:17-cv-05920-JSW |
| 17 | V. | LOCAL PATENT RULE 4-3 JOINT CLAIM CONSTRUCTION AND |
| 18 | | PREHEARING STATEMENT |
| 19 | CIENA CORPORATION, | |
| 20 | Defendant. | |
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LOCAL PATENT RULE 4-3 JOINT CLAIM CONSTRUCTION AND PREHEARING STATEMENT

Plaintiff Oyster Optics, LLC and Ciena Corporation hereby jointly provide this Joint Claim Construction Chart and Prehearing Statement pursuant to Local Patent Rule 4-3.

I. LIST OF PROPOSED CLAIM TERMS TO WHICH THE PARTIES AGREED ON A CONSTRUCTION (PATENT L.R. 4-3(a)).

The parties have agreed that a number of terms initially identified in their identification of terms for construction do not require construction, and narrowed the list of terms with disputed constructions to those reflected below. The parties have agreed on the constructions provided in the chart below: The parties are continuing to meet and confer in an effort to further limit the number of disputed claim terms.

| U.S. Patent N | No. 8, 374,511 |
|---|--|
| "the optical signals" | "the optical signal transmitted by the transmitter" |
| ('511 patent – cl. 1, 9) | |
| "an electric signal" | "an electrical signal" |
| ('511 patent – cl. 1, 9) | |
| | |
| "the electrical signal" | "an electric signal" is the antecedent basis for |
| ('511 patent- cl. 1, 9) | the term "the electrical signal" |
| "filtering the electrical signal to produce an | "filtering the electrical signal from the |
| average optical power" | photodetector to provide the average optical |
| ('511 patent – cl. 1, 9) | power of the optical signals" |
| 5. "the phase-modulated optical signals" | "the phase-modulated optical signal |
| ('511 patent – cl. 9) | transmitted by the transmitter" |
| U.S. Patent 1 | No. 8,913,898 |
| "the second optical signal" ('898 patent – cl. 1, | "a second optical signal" is antecedent basis |
| 4, 14, 18, 23) | for "the second optical signal" |
| | |
| "transceiver card" ('898 – cl. 1, 14) | "transceiver card" is "a card having a transmitter and a receiver. This term is limiting both in the preamble and in the body of the asserted claims." |

II. PROPOSED CLAIM CONSTRUCTIONS BY EACH PARTY FOR THE DISPUTED CLAIM TERMS (PATENT L.R. 4-3(b)).

Pursuant to Patent L.R. 4-3(b), the Parties' proposed constructions of disputed terms are provided in the chart below along with the intrinsic and extrinsic evidence on which the parties intend to rely. ¹

| Claim Term/Phrase | Oyster's Proposed | Ciena's Proposed |
|---|--|--|
| | Construction ² | Construction |
| "the optical signals" ('327 patent – cl. 1, 14, 25, 36) | "the optical data signals received on the fiber input from the second optical fiber" | "transmitting optical signals" is the antecedent basis for "the optical signals," |
| | Intrinsic Evidence: 327 Patent at 4:43-49; 5:26- 54; 6:12-27; Figs. 2, 3 | Otherwise Indefinite |
| | Extrinsic Evidence: Petition for Inter Partes Review of Claims 1- 12, 22, and 33 of U.S. Patent No. 7,620,327 by Cisco Systems, Inc. and Oclaro, Inc., at 11, 19-22 and 27-30; Petition for Inter Partes Review of Claims 14-21, 23, 25-32, 34, and 36- 38 of U.S. Patent No. 7,620,327 by Cisco Systems, Inc. and Oclaro, Inc., at 11, 15-18 and 27-30; and any other petitions for inter partes review of the patents-in-suit that may be filed later. | Intrinsic Evidence: '327 File History: NON-FINAL OFFICE ACTION, Jan. 21, 2009 Amendment, Feb. 17, 2009 (wrongly dated Feb. 13) '327 patent at 6:51–53, 60–62; 7:33–35, 7:42–44, 8:12–14, 21–22, 8:56–58, 66–67; 9:1 '898 patent claims IPR2017-01871 Paper Nos. 7, 11 IPR2017-01882 Paper Nos. 7, 11 IPR2017-02173 Paper No. 10, 12 IPR2018-00259 Paper No. 10, 12 |
| | Lebby Decl. | Extrinsic Evidence: Gitlin Decl. |

¹ The '898, '327, and '511 patents share a common specification. When any of these patents is cited, it should be understood as a citation to the same disclosure in the other patents. The parties reserve the right to introduce extrinsic evidence to impeach or rebut the other expert's declarant to the extent one exists.

² In addition to the intrinsic evidence cites identified by Oyster, Oyster reserves the right to use any intrinsic evidence relied on by Ciena.

| 1 | Claim Term/Phrase | Oyster's Proposed Construction ² | Ciena's Proposed Construction |
|----|---|---|--|
| 2 | | Construction | Gitlin, et al., Data |
| 3 | | | Communication Principles (Plenum Press 1992) |
| 4 | | | Oyster Optics, Inc., Securing |
| | | | Fiber Optic Communications against Optical Tapping |
| 5 | · · · · · · · · · · · · · · · · · · · | 2227 1 2511 4 4 4 22 | Methods (2002-2003) |
| 6 | "receiver" ('327 patent – cl. 1, 14, 25, 36) | '327 and '511 patents: "receiver" (plain meaning) | "receiver without a demodulator." |
| 7 | ('898 patent – cl. 1, 14) ('511 patent – cl. 1, 9) | '898 patent: "receiver without a | 2000 E.I. H. (|
| 8 | | demodulator'' | '898 File HistoryNON-FINAL OFFICE |
| 9 | | Intrinsic Evidence: | ACTION, June 26, 2013 |
| 10 | | '327 Patent at Abstract; 4:39-47; 4:50-67; 5:55-6:15; 6:42- | • Amendment, Oct. 21, 2013 (improperly dated |
| 11 | | 43; Figs. 2, 3 | Feb. 5, 2013) |
| 12 | | Extrinsic Evidence: | • NON-FINAL OFFICE ACTION, Dec. 31, 2013 |
| | | Fiber Optics Standard | • Amendment, April 15, |
| 13 | | Dictionary, Third Ed. (1997) at 840 ("receiver | 2014 • FINAL OFFICE |
| 14 | | The portion of a | ACTION, June 18, |
| 15 | | communications system in which radio, | 2014Amendment, Aug. 15, 2014 |
| 16 | | optical, electronic, or sound | , |
| 17 | | signals are (a) converted into visible images | |
| 18 | | or audible | |
| 19 | | sounds or (b) accepted, processed, and | |
| | | furnished to another portion | |
| 20 | | of the system.") Petition for Inter Partes | |
| 21 | | Review of Claims 1- | |
| 22 | | 13, 15-23, and 27 of U.S. Patent No. | |
| 23 | | 6,594,055 by Cisco Systems, Inc. and Oclaro, | |
| 24 | | Inc., at 23; | |
| 25 | | Petition for Inter Partes Review of Claims 1- | |
| 26 | | 12, and 23 of U.S. Patent No. | |
| | | 8,913,898 by Cisco Systems, Inc. and | |
| 27 | | Oclaro, Inc., at 6-20; Petition | |
| 28 | | 2 | |

| 1 | Claim Term/Phrase | Oyster's Proposed Construction ² | Ciena's Proposed Construction |
|-------------|---|--|--|
| $_{2}\Vert$ | | for Inter Partes Review of | Constituction |
| | | Claims 1- | |
| 3 | | 12, 22, and 33 of U.S. Patent No. 7,620,327 | |
| 4 | | by Cisco Systems, Inc. and | |
| 5 | | Oclaro, Inc., at 6- | |
| | | 22; Petition for Inter Partes | |
| 6 | | Review of Claims 1- | |
| 7 | | 7 and 9-15 of U.S. Patent No. | |
| $_{8}\ $ | | 8,374,511 by | |
| | | Cisco Systems, Inc. and Oclaro, Inc., at 5-16; | |
| 9 | | Petition for Inter Partes | |
| 10 | | Review of Claims | |
| 11 | | 14-22, and 24 of U.S. Patent No. 8,913,898 | |
| | | by Cisco Systems, Inc. and | |
| 12 | | Oclaro, Inc., at 6- | |
| 13 | | 20; and Petition for Inter Partes | |
| 14 | | Review of Claims | |
| 15 | | 14-21, 23, 25-32, 34, and 36- | |
| | | 38 of U.S. Patent No. 7,620,327 by | |
| 16 | | Cisco Systems, Inc. | |
| 17 | | and Oclaro, Inc., at 15-18; | |
| 18 | | and any other petitions for inter partes | |
| | | review of the patents-in-suit | |
| 19 | | that may be filed | |
| 20 | | later. | |
| 21 | | Lebby Decl. | |
| | "energy level detector including | "energy level detector" | "a single energy level |
| 22 | a threshold" / "energy level detector includes a plurality of | construed as "device to measure optical power" | detector on a transceiver card and including a reference |
| 23 | thresholds" / "energy level | • | voltage for comparison to the |
| 24 | detector including a threshold" ('327 patent – cl 1, 14, 25) | Intrinsic Evidence: | energy level of [the optical |
| | ('898 patent – cl. 1, 14) | '327 Patent: Abstract; 2:59-3:55; 4:39-47; | signals / the second optical |
| 25 | | 4:50-67; 5:6-6:27; 6:42-43; | signal]" / "a single energy level |
| 26 | | Figs. 2, 3 | detector on a transceiver card |
| 27 | | Extrinsic Evidence: | and including reference |
| | | | voltages for comparison to the energy level of [the |
| 28 | | $\it \Delta$ | |

| 1 | Claim Term/Phrase | Oyster's Proposed Construction ² | Ciena's Proposed Construction |
|---------------|--------------------------------------|--|---|
| $2 \parallel$ | | Petition for Inter Partes | optical signals / the second |
| | | Review of Claims 1- | optical signal]" / |
| 3 | | 20 of U.S. Patent No. | Intuincia Evidance |
| 4 | | 6,469,816 by Cisco Systems, Inc. and Oclaro, | Intrinsic Evidence: 327 patent at 5:20-25, 5:55- |
| 5 | | Inc., at 63-64 and | 6:27, Fig. 3 |
| 3 | | 72; | IPR2017-02173 Paper No. |
| 6 | | Petition for Inter Partes Period of Claims 1, 12, and | 10, 12 |
| 7 | | Review of Claims 1-12, and 23 of U.S. Patent No. | IPR2018-00259 Paper No. 10, 12 |
| . | | 8,913,898 by Cisco Systems, | IPR2018-00070 Paper No. |
| 8 | | Inc. and Oclaro, Inc., at 5-16; | 12, 14, 26, 46, 53, 54 |
| 9 | | Petition for Inter Partes Period of Claims 1, 12, 22 | IPR2018-00257 Paper No. |
| 10 | | Review of Claims 1-12, 22, and 33 of U.S. Patent No. | 12, 14 IPR2017-01871 Paper Nos. 7, |
| | | 7,620,327 by Cisco Systems, | 11 |
| 11 | | Inc. and Oclaro, Inc., at 3-4, | IPR2017-01882 Paper Nos. 7, |
| 12 | | 6-7, 8-12 and 15-17; Petition | 11 IDD2017 01970 D N 9 |
| | | for Inter Partes Review of Claims 14-22, and 24 of U.S. | IPR2017-01870 Paper Nos. 8, 12IPR2017-01881 Paper Nos. |
| 13 | | Patent No. 8,913,898 by | 7, 11, 16, 23, 27, 29 |
| 14 | | Cisco Systems, Inc. and | |
| 15 | | Oclaro, Inc., at 7-15; and | |
| | | Petition for Inter Partes Review of Claims 14-21, 23, | |
| 16 | | 25-32, 34, and 36-38 of U.S. | |
| 17 | | Patent No. 7,620,327 by | |
| | | Cisco Systems, Inc. and | |
| 18 | | Oclaro, Inc., at 6-7 and 12; and any other petitions for | |
| 19 | | inter partes review of the | |
| 20 | | patents-in-suit that may be | |
| | | filed later. | |
| 21 | | Lebby Decl. | |
| 22 | "phase modulate" / "phase modulator" | "alter the phase of light to create | "alter the phase of light while |
| 23 | ('327 patent – cl. 3, 16, 27, 37) | an optical signal having a phase that is representative of data. Use | keeping the amplitude of the |
| | ('511 patent – cl. 9) | of phase modulation excludes | light constant to create an optical signal having a phase |
| 24 | ('898 patent – cl. 3, 17) | use of amplitude modulation." | that is representative of data" |
| 25 | | Intrinsic Evidence: | |
| 26 | | '327 Patent: Abstract; 1:25- | Intrinsic Evidence: '327 patent at 1:18-23, 1:45- |
| | | 30; 2:25-47; 4:64-67; Fig. 2 | 46, 4:30-33, 4:39-47, Fig. 2 |
| 27 | | | ,,,,,, |
| 28 | | 5 | |

| Extrinsic Evidence; Fiber Optics Standard Dictionary, Third Ed. (1997) at 742 ("phase modulation: Angle modulation in which the phase angle of a carrier; such as an electronic, radio, or optical carrier, is caused to depart from its reference value by an amount proportional to the instantaneous value of the modulating signal", "optical phase modulator: An optical device that controls or varies the phase of a lightwave relative to a fixed reference or relative to another lightwave in accordance with an information-bearing signal.") The Authoritative Dictionary of IEEE Standards Terms, Seventh Fd. (2000) at S16 ("phase modulation in which the angle of a carrier is caused to depart from its reference value by an amount proportional to the instantaneous value of the modulating function"). Petition for Inter Partes Review of Claims 1-13, and 27-28; Petition for Inter Partes Review of Claims 1-13, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 cell S Patent No. 2015 and 201 | 1 | Claim Term/Phrase | Oyster's Proposed | Ciena's Proposed |
|--|-----|-------------------|--------------------------------|-------------------------|
| Optics Standard Dictionary, Third Ed. (1997) at 742 ("phase modulation: Angle modulation in which the phase angle of a carrier, such as an electronic, radio, or optical carrier, is caused to depart from its reference value by an amount proportional to the instantaneous value of the modulating signal"; "optical phase modulator: An optical device that controls or varies the phase of a lightwave relative to a fixed reference or relative to another lightwave in accordance with an information-bearing signal.") The Authoritative Dictionary of IEEE Standards Terms, Seventh Ed. (2000) at 816 ("phase modulation (1) (data transmission) Angle modulation in which the angle of a carrier is caused to depart from its reference value by an amount proportional to the instantaneous value of the modulating function"). Petition for Inter Partes Review of Claims 1- 20 of U.S. Patent No. 64,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17 and 27-28; Petition for Inter Partes Review of Claims 1-13, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17 and 27-28; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17 and 27-28; Petition for Inter Partes Review of Claims 1-12, and 24 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17 and 27-28; Petition for Inter Partes Review of Claims 1-12, and 24 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17 and 27-28; Petition | | | Construction ² | Construction |
| Third Ed. (1997) at 742 ("phase modulation: Angle modulation in which the phase angle of a carrier, such as an electronic, radio, or optical carrier, is caused to depart from its reference value by an amount proportional to the instantaneous value of the modulating signal"; "optical phase modulator: An optical device that controls or varies the phase of a lightwave relative to a fixed reference or relative to another lightwave in accordance with an information-bearing signal.") The Authoritative Dictionary of IEEE Standards Terms, Seventh Ed. (2000) at 816 ("phase modulation (1) (data transmission) Angle modulation in which the angle of a carrier is caused to depart from its reference value by an amount proportional to the instantaneous value of the modulating function"). Petition for Inter Partes Review of Claims 1-20 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,2693,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,2693,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,2693,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,2693,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,2693,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,2693,050 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and | 2 | | | |
| ("phase modulation: Angle modulation in which the phase angle of a carrier; such as an electronic, radio, or optical carrier, is caused to depart from its reference value by an amount proportional to the instantaneous value of the modulating signal"; "optical phase modulator: An optical device that controls or varies the phase of a lightwave relative to a fixed reference or relative to another lightwave in accordance with an information-bearing signal.") The Authoritative Dictionary of IEEE Standards Terms, Seventh Ed. (2000) at 816 ("phase modulation (1) (data transmission) Angle modulation in which the angle of a carrier is caused to depart from its reference value by an amount proportional to the instantaneous value of the modulating function"), Petition for Inter Partes Review of Claims 1- 20 of U.S. Patent No. 6.469,816 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17 and 27-28; Petition for Inter Partes Review of Claims 1- 13, and 27 of U.S. Patent No. 6.594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1- 12, and 23-28; Better No. 22 of Users North No. 24, 26 U.S. Patent No. 24, 26 U.S. Patent No. 25, 26 U.S. Patent No. 26, 26, 26 U.S. Patent No. 26, 26, 26, 26 U.S. Patent No. 27, 27, 27, 2011) | 2 | | 1 | |
| modulation in which the phase angle of a carrier, such as an electronic, radio, or optical carrier, is caused to depart from its reference value by an amount proportional to the instantaneous value of the modulating signal?" optical phase modulator: An optical device that controls or varies the phase of a lightwave relative to a fixed reference or relative to another lightwave in accordance with an information-bearing signal.") The Authoritative Dictionary of IEEE Standards Terms, Seventh Ed. (2000) at 816 ("phase modulation (1) (data transmission) Angle modulation in which the angle of a carrier is caused to depart from its reference value by an amount proportional to the instantaneous value of the modulating function"). Petition for Inter Partes Review of Claims 1-20 of U.S. Patent No. 6,469,816 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-13, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23-6 U.S. Patent No. 6,469,516 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23-6 U.S. Patent No. 6,469,816 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23-6 U.S. Patent No. 6,469,816 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23-6 U.S. Patent No. 6,469,816 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23-6 U.S. Patent No. 6,469,816 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 25-6 U.S. Patent No. 6,469,816 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 25- | 3 | | | |
| phase angle of a carrier, such as an electronic, radio, or optical carrier, is caused to depart from its reference value by an amount proportional to the instantaneous value of the modulating signal"; "optical phase modulator: An optical advice that controls or varies the phase of a lightwave relative to a fixed reference or relative to another lightwave in accordance with an information-bearing signal.") The Authoritative Dictionary of IEEE Standards Terms, Seventh Ed. (2000) at 816 ("phase modulation (1) (data transmission) Angle modulation in which the angle of a carrier is caused to depart from its reference value by an amount proportional to the instantaneous value of the modulating function"). Petition for Inter Partes Review of Claims 1-20 of U.S. Patent No. 6,469,816 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, and 27-28; Petition for Inter Partes Review of Claims 1-13, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 27-28; Petition for Inter Partes Review of Claims 1-12, and 27-28; Petition for Inter Partes Review of Claims 1-12, and 27-28; Petition for Inter Partes Review of Claims 1-12, and 27-28; Petition for Inter Partes Review of Claims 1-12, and 27-28; Petition for Inter Partes Review of Claims 1-12, and 27-29; Petition for Inter Partes Review of Claims 1-12, and 27-29; Petition for Inter Partes Review of Claims 1-12, and 27-29; Petition for Inter Partes Review of Claims 1-12, and 27-29; Petition for Inter Partes Review of Claims 1-12, and 27-29; Petition for Inter Partes Review of Claims 1-12, and 27-29; Petition for Inter Partes Review of Claims 1-12, and 27-29; Petition for Inter Partes Review of Claims 1-12, and 27-29; Petition for Inter Partes Review of Claims 1-12, and 27-29; Petition for Inter Partes Review of | 4 | | ` 1 | 3.11-14, 0.30-42 |
| as an electronic, radio, or optical carrier, is caused to depart from its reference value by an amount proportional to the instantaneous value of the modulating signal?", "optical phase modulator: An optical device that controls or varies the phase of a lightwave relative to a fixed reference or relative to a nother lightwave in accordance with an information-bearing signal.") The Authoritative Dictionary of IEEE Standards Terms, Seventh Ed. (2000) at 816 ("phase modulation (1) (data transmission) Angle modulation in which the angle of a carrier is caused to depart from its reference value by an amount proportional to the instantaneous value of the modulating function"). Petition for Inter Partes Review of Claims 1-13, and 27-28; Petition for Inter Partes Review of Claims 1-13, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,254,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review o | 5 | | | '327 File History: |
| depart from its reference value by an amount proportional to the instantaneous value of the modulating signal"; "optical phase modulator: An optical device that controls or varies the phase of a lightwave relative to a fixed reference or relative to an fixed reference or relative to an fixed reference or relative to another lightwave in accordance with an information-bearing signal.") The Authoritative Dictionary of IEEE Standards Terms, Seventh Ed. (2000) at 816 ("phase modulation (1) (data transmission) Angle modulation in which the angle of a carrier is caused to depart from its reference value by an amount proportional to the instantaneous value of the modulating function"). Petition for Inter Partes Review of Claims 1-20 of U.S. Patent No. 6,469,816 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, and 27-28; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,189,4055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,189,4055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,189,4055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,180,405 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,180,405 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,180,405 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 6,180,405 by Cisco Syst | 3 | | as an electronic, radio, or | , |
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| or relative to another lightwave in accordance with an information-bearing signal.") The Authoritative Dictionary of IEEE Standards Terms, Seventh Ed. (2000) at 816 ("phase modulation (1) (data transmission) Angle modulation in which the angle of a carrier is caused to depart from its reference value by an amount proportional to the instantaneous value of the modulating function"). Petition for Inter Partes Review of Claims 1- 20 of U.S. Patent No. 6,469,816 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17 and 27-28; Petition for Inter Partes Review of Claims 1- 13, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 22 of U.S. Patent No. 6,2594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 22 of U.S. Patent No. 8,2007 **NON-FINAL OFFICE ACTION, Oct. 3, 2007 **Amendment, Oct. 15, 2007 **S11 File History: **NON-FINAL OFFICE ACTION, Oct. 3, 2007 **Amendment, Oct. 15, 2007 **S11 File History: **NON-FINAL OFFICE ACTION, Oct. 3, 2007 **S11 File History: **NON-FINAL OFFICE ACTION, Oct. 3, 2007 **S11 File History: **NON-FINAL OFFICE ACTION, Oct. 3, 2007 **S11 File History: **NON-FINAL OFFICE ACTION, Oct. 3, 2007 **Mendment, Oct. 15, 2007 **ONN-FINAL OFFICE ACTION, Oct. 3, 2007 **S11 File History: **NON-FINAL OFFICE ACTION, Oct. 3, 2007 **Mendment, Oct. 15, 2007 **ONN-FINAL OFFICE ACTION, Oct. 3, 2007 **S11 File History: **NON-FINAL OFFICE ACTION, Oct. 3, 2007 **ONN-FINAL OFFICE ACTION, Oct. 3, 2007 **Mendment, Oct. 15, 2007 **ONN-FINAL OFFICE ACTION, Oct. 3, 2007 **INDREMATION, Oct. 15, 2007 **INDREMATION, Oct. 15, 2007 **INDREMATION, Oct. 15, 2007 **INDREMATION, O | 1.1 | | | 2006 |
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| angle of a carrier is caused to depart from its reference value by an amount proportional to the instantaneous value of the modulating function"). Petition for Inter Partes Review of Claims 1- 20 of U.S. Patent No. 6,469,816 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17 and 27-28; Petition for Inter Partes Review of Claims 1- 13, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1- 12, and 23 of U.S. Patent No. 24 of U.S. Patent No. 25 of U.S. Patent No. 25 of U.S. Patent No. 26 of Claims 1- 12, and 27 of U.S. Patent No. 27 of U.S. Patent No. 28 of U.S. Patent No. 29 of U.S. Patent No. 29 of U.S. Patent No. 20 of U.S. | 16 | | ` | |
| depart from its reference value by an amount proportional to the instantaneous value of the modulating function"). Petition for Inter Partes Review of Claims 1- 20 of U.S. Patent No. 6,469,816 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17 and 27-28; Petition for Inter Partes Review of Claims 1- 13, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. Patent No. Review of Claims 1-12, and | 1.7 | | | * |
| value by an amount proportional to the instantaneous value of the modulating function"). Petition for Inter Partes Review of Claims 1- 20 of U.S. Patent No. 6,469,816 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17 and 27-28; Petition for Inter Partes Review of Claims 1- 13, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 25 Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. Review of Claims 1-12, and 23 of U.S. Patent No. Review of Claims 1-12, and 23 of U.S. Patent No. Review of Claims 1-12, and 23 of U.S. Patent No. Review of Claims 1-12, and 23 of U.S. Patent No. Review of Claims 1-12, and 23 of U.S. Patent No. Review of Claims 1-12, and 23 of U.S. Patent No. Review of Claims 1-12, and 23 of U.S. Patent No. Review of Claims 1-12, and 23 of U.S. Patent No. Review of Claims 1-12, and 24 of U.S. Patent No. Review of Claims 1-12, and 25 of U.S. Patent No. Review of Claims 1-12, and Review of Claims 1-12, and | 1 / | | | |
| proportional to the instantaneous value of the modulating function"). Petition for Inter Partes Review of Claims 1- 20 of U.S. Patent No. 6,469,816 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17 and 27-28; Petition for Inter Partes Review of Claims 1- 13, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1- 12, and Review of Claims 1-12, and | 18 | | * | |
| instantaneous value of the modulating function"). Petition for Inter Partes Review of Claims 1- 20 of U.S. Patent No. 6,469,816 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17 and 27-28; Petition for Inter Partes Review of Claims 1- 13, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 25 Review of Claims 1-12, and 23 of U.S. Patent No. 26 Review of Claims 1-12, and 27 of U.S. Patent No. 28 File History: Claims and Preliminary Amendment, Feb. 5, 2013 Extrinsic Evidence: Gitlin Decl. | 10 | | * * | , |
| Petition for Inter Partes Review of Claims 1- 20 of U.S. Patent No. 6,469,816 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17 and 27-28; Petition for Inter Partes Review of Claims 1- 13, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. | 19 | | | 27, 2011) |
| Review of Claims 1- 20 of U.S. Patent No. 6,469,816 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17 and 27-28; Petition for Inter Partes Review of Claims 1- 13, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 24 Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. | 20 | | , | 3 |
| U.S. Patent No. 6,469,816 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17 and 27-28; Petition for Inter Partes Review of Claims 1- 13, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 24 Review of Claims 1-12, and 23 of U.S. Patent No. | | | | - 1 |
| Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17 and 27-28; Petition for Inter Partes Review of Claims 1- 13, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. 25 Review of Claims 1-12, and 23 of U.S. Patent No. | 21 | | | Amendment, Feb. 5, 2013 |
| Oclaro, Inc., at 4-7, 10-17 and 27-28; Petition for Inter Partes Review of Claims 1- 13, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. | 22 | | | Extrinsic Evidence: |
| Partes Review of Claims 1- 13, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. | 22 | | | |
| 13, and 27 of U.S. Patent No. 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. | 25 | | | |
| 25 6,594,055 by Cisco Systems, Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. | 24 | | | |
| Inc. and Oclaro, Inc., at 4-7, 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. | | | | |
| 26 10-17, 25-26, and 36-38; Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. | 25 | | | |
| Petition for Inter Partes Review of Claims 1-12, and 23 of U.S. Patent No. | 26 | | | |
| 22 of U.S. Datant No. | | | Petition for Inter Partes | |
| 28 23 of U.S. Patent No. | 21 | | | |
| - II | 28 | | 23 of U.S. Patent No. | |

| 1 | Claim Term/Phrase | Oyster's Proposed | Ciena's Proposed |
|------|---|---|---|
| | | Construction ² | Construction |
| 2 | | 8,913,898 by Cisco Systems, | |
| 3 | | Inc. and Oclaro, Inc., at 21-24 and 48-55; Petition for Inter | |
| | | Partes Review of Claims 1-7 | |
| 4 | | and 9-15 of U.S. Patent No. | |
| 5 | | 8,374,511 by Cisco Systems, | |
| | | Inc. and Oclaro, Inc., at 16- | |
| 6 | | 18 and 52-56; Petition for Inter Partes Review of Claims | |
| 7 | | 14-22, and 24 of U.S. Patent | |
| | | No. 8,913,898 by Cisco | |
| 8 | | Systems, Inc. and Oclaro, | |
| 9 | | Inc., at 20-23 and 50-51; and | |
| | | any other petitions for inter | |
| 10 | | partes review of the patents- in-suit that may be filed later. | |
| 11 | | in suit that may be med fatel. | |
| 12 | | Lebby Decl. | |
| 12 | "receiver configured to | "receiver" is a "receiver without | "a receiver that converts the |
| 13 | convert the second optical signal to output data" | a demodulator" as set forth above. Otherwise, plain and | second optical signal from |
| 14 | ('898 patent – cl. 1, 14) | ordinary meaning. | optical to electronic form to recover the data carried by |
| 14 | | | the second optical signal" |
| 15 | | Intrinsic Evidence: | and a control of the |
| 16 | | 327 Patent at Abstract; 4:39-47; 4:50-67; 5:55-6:15; 6:42- | Intrinsic Evidence: |
| | | 43; Figs. 2, 3 | '898 patent at 1:42-51, 2:30-34, 4:11-21, 4:55-61, 5:2-5, |
| 17 | | , 5 | Figure 2. |
| 18 | | Extrinsic Evidence: | '898 patent file history: |
| | | Fiber Optics Standard | NON-FINAL |
| 19 | | Dictionary, Third Ed. (1997) at 840 ("receiver The | OFFICE ACTION, June 26, |
| 20 | | portion of a communications | • Amendment Oct 21 |
| | | system in which radio, | • Amendment, Oct. 21, 2013 |
| 21 | | optical, electronic, or sound | • NON-FINAL |
| 22 | | signals are (a) converted into | OFFICE ACTION, Dec. 31, |
| | | visible images or audible sounds or (b) accepted, | 2013 |
| 23 | | processed, and furnished to | • Amendment, April 15, |
| 24 | | another portion of the | • FINAL OFFICE |
| 25 | | system.") Petition for Inter | ACTION, June 18, 2014 |
| ا (۵ | | Partes Review of Claims 1- | • Amendment, Aug. 15, |
| 26 | | 13, 15-23, and 27 of U.S. | 2014 |
| 27 | | Patent No. 6,594,055 by Cisco Systems, Inc. and | IPR2018-00070 Paper No. |
| | | Oclaro, Inc., at 23; Petition | 12, 14, 26, 46, 53, 54 |
| 28 | | 7 | |

| 1 | Claim Term/Phrase | Oyster's Proposed Construction ² | Ciena's Proposed Construction |
|-----|--|---|--|
| 2 | | for Inter Partes Review of | IPR2018-00257 Paper No 12, |
| 3 | | Claims 1- 12, and 23 of U.S. Patent No. 8,913,898 by | 14 IPR2017-01870 Paper Nos. 8, |
| 4 | | Cisco Systems, Inc. and Oclaro, Inc., at 6-20; Petition | 12 IPR2017-01881 Paper Nos. 7, |
| 5 | | for Inter Partes Review of Claims 1- 12, 22, and 33 of | 11, 16, 23, 27, 29 |
| 6 | | U.S. Patent No. 7,620,327 by Cisco Systems, Inc. and | |
| 7 | | Oclaro, Inc., at 6-22; | |
| 8 | | Petition for Inter Partes Review of Claims 1-7 and 9- | |
| 9 | | 15 of U.S. Patent No. 8,374,511 by Cisco Systems, | |
| 10 | | Inc. and Oclaro, Inc., at 5-16; | |
| 11 | | Petition for Inter Partes Review of Claims 14-22, and | |
| 12 | | 24 of U.S. Patent No. 8,913,898 by Cisco Systems, | |
| 13 | | Inc. and Oclaro, Inc., at 6-20; | |
| 14 | | and Petition for Inter Partes Review of Claims 14-21, 23, | |
| 15 | | 25-32, 34, and 36-38 of U.S. Patent No. 7,620,327 by | |
| 16 | | Cisco Systems, Inc. and Oclaro, Inc., at 15-18; and | |
| 17 | | any other petitions for inter | |
| 18 | | partes review of the patents- in-suit that may be filed later. | |
| 19 | | Lebby Decl. | |
| 20 | "a transmitter having a laser, a modulator, and a controller" | Plain and ordinary meaning | "A transmitter having a laser, a modulator, and a controller |
| 21 | ('327 patent – cl. 1, 14, 25, 36) ('898 patent – cl. 1, 14) | Intrinsic Record: | located within the |
| 22 | (550 patent - 51. 1, 11) | '327 Patent at Abstract, 1:15-30, 1:40-44, 3:4-15 '327 | transmitter." |
| 23 | | patent – cl 1, 14, 25, 36 '898 patent – cl 1, 13 | Intrinsic Evidence: '327 patent at 1:18-20, 4:27- |
| 24 | | patent – ci 1, 13 | 36, 6:31-37, 7:27-31, 8:6-10, |
| 25 | | | 8:51-55, Figure 2 '327 Patent File History: |
| 26 | | | • NON-FINAL OFFICE ACTION, Jan. 21, |
| 27 | | | 2009 |
| - ' | | | |

| Claim Term/Phrase | Oyster's Proposed | Ciena's Proposed |
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| | Construction ² | Construction |
| | | • Amendment, Feb. 17, |
| | | 2009 (wrongly dated Feb. 13, |
| | | 2009) |
| | | • FINAL OFFICE |
| | | ACTION, May 11, 2009 |
| | | • Amendment, May 26, |
| | | 2009 |
| | | IPR2018-00070 Paper Nos. |
| | | 12, 14, 26, 46, 53, 54. |
| | | IPR2017-02173 Paper No. |
| | | 10, 12 |
| | | IPR2018-00259 Paper No. |
| | | 10, 12 |
| | | IPR2018-00257 Paper No. |
| | | 12, 14 |
| | | IPR2017-01870 Paper Nos. 8, |
| | | 12 |
| | | IPR2017-01881 Paper Nos. 7, |
| | | 11, 16, 23, 27, 29 |
| | | IPR2017-01871 Paper Nos. 7, 11 |
| | | IPR2017-01882 Paper Nos. 7, |
| | | 11 K2017-01682 Laper Nos. 7, |
| "The plurality of thresholds" | Plain and ordinary meaning | Indefinite |
| ('327 patent – cl. 22, 33) | _ | |
| ('898 patent – cl. 23) | Intrinsic Record: | Intrinsic Evidence: |
| | '327 Patent at 5:20-25; 6:7- | '327 patent claims 14, 22, 25, |
| | 15; '327 Patent at 6:16-20; | 33. |
| | '327 patent – cl. 22, 23 '898 | '898 patent claims 14, 23. |
| | patent – cl. 23 | Extrinsic Evidence: |
| | | C::I: F 1 |
| | | Gitlin Decl. |

III. IDENTIFICATION OF THE TERMS WHOSE CONSTRUCTION WILL BE MOST SIGNIFICANT TO THE RESOLUTION OF THE CASE (PATENT L.R. 4-3(c))

The Parties have consolidated their jointly proposed terms for construction to fewer than ten disputed terms. The parties' position as to the importance of the terms is set forth in the chart below.

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| 1 | Claim Term/Phrase | Oyster's position as to | Ciena's position as to |
|----|--|--|---|
| 2 | | whether this term is case or claim dispositive | whether this term is case or claim dispositive |
| 3 | "the optical signals" | Case dispositive as it relates | Case dispositive as it relates |
| 4 | ('327 patent – cl. 1, 14, 25, 36) | to the '327 patent | to the '327 patent |
| 5 | "receiver" ('327 patent – cl. 1, 14, 25, 36) | Not case or claim dispositive | Case dispositive |
| 6 | ('898 patent – cl. 1, 14) ('511 patent – cl. 1, 9) | | |
| 7 | "energy level detector including a threshold" / "energy level | Not case or claim dispositive | Case dispositive as it relates to the '898 patent |
| 8 | detector includes a plurality of thresholds" / "energy level | | to the 656 parent |
| 9 | detector including a threshold" ('327 patent – cl 1, 14, 25) | | |
| 10 | ('898 patent – cl. 1, 14) "phase modulate" / "phase | Not cose on claim dismositive | Claim diamagitive |
| 11 | modulator" | Not case or claim dispositive | Claim dispositive |
| 12 | ('327 patent – cl. 3, 16, 27, 37) ('511 patent – cl. 9) | | |
| 13 | ('898 patent – cl. 3, 17) "receiver configured to | Not case or claim dispositive | Case dispositive as it relates |
| 14 | to output data" | | to the '898 patent |
| 15 | ('898 patent – cl. 1, 14) "a transmitter having a laser, a | Not case or claim dispositive | Case dispositive as it relates |
| 16 | modulator, and a controller" ('327 patent – cl. 1, 14, 25, 36) | | to the '327 and '898 patents |
| 17 | ('898 patent – cl. 1, 14) "The plurality of thresholds" | Claim dispositive | Claim dispositive |
| 18 | ('327 patent – cl. 22, 33) ('898 patent – cl. 23) | | |
| 19 | IV. ANTICIPATED | LENGTH OF TIME NEEDE | D FOR THE CLAIM |

IV. ANTICIPATED LENGTH OF TIME NEEDED FOR THE CLAIM CONSTRUCTION HEARING (PATENT L.R. 4-3(d)).

Pursuant to Pat. L.R. 4-3(d), the anticipate that the hearing will take no longer than three hours.

V. PROPOSED WITNESSES TO BE USED AT THE CLAIM CONSTRUCTION HEARING (PATENT L.R. 4-3(e)).

The parties do not currently anticipate calling any witnesses at this time.

VI. IDENTIFICATION OF FACTUAL FINDINGS REQUEST FROM THE COURT.

Ciena requests the following factual findings:

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| • | A POSITA would have understood that the '327 and '898 patents teach that the "phase |
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| | modulate/phase modulator" terms mean "altering the phase of light while keeping the amplitude |
| | of the light constant to create an optical signal having a phase that is representative of the data." |
| | Gitlin Decl. at 9:16-10:22. |

- In all embodiments of the '327 patent, a POSITA would have understood that "the optical signals," as claimed, refers to the claimed "transmitting optical signals." And, absent referring to transmitted optical signals, a POSITA would not know what "the optical signals" refers to in the '327 patent's claims. *Id.* at 10:23-12:21.
- A POSITA would not have understood what "the plurality of thresholds" refers to in claims 22 and 33 of the '327 patent and claim 23 of the '898 patent *Id.* at 12:21-14:2
- Ciena expressly opposes Oyster's requested factual findings and reserves the right to provide rebuttal expert testimony in the form of live testimony, declaration, deposition, or any other form acceptable to the Court. .

Oyster requests the following factual findings:

With respect to the claim phrase "the optical signals":

- In all embodiments of '327, including in particular Figures 2 and 3 and their corresponding specification descriptions, a POSITA would understand that the patent teaches that the transceiver is not receiving the same signal it is sending out. There is no connection drawn, nor there is any description of the transmitter optical signal going elsewhere other than out of the transceiver to a receiver in the optical network. Lebby Decl. ¶ 80.
- The '327 patent teaches that the received signal comes from another transceiver in the optical network. Lebby Decl. ¶ 80.
- One skilled in the art would understand that "the optical signals" in the claims are not exactly the same "optical signals" that are transmitted by the transmitter on the transceiver card. Lebby Decl. ¶ 84.

| • | Anyone skilled in the art would understand that there are—and must be—"optical signals" that |
|---|--|
| | are received over the second optical fiber and that have been transmitted by another device at |
| | the other end of that second optical fiber, outside of the transceiver card. Lebby Decl. ¶ 84. |

- Any interpretation of the claims of the '327 patent that requires that the output of the transmitter in any transceiver to be fed into the receiver of the same transceiver would exclude or read out each and every embodiment taught or described in the patent. Lebby Decl. ¶ 90.
 - The patentee amended claims so as to recite "transmitting optical signals" as well as to recite that the energy level detector is "to measure an energy level of the optical signals," and the patentee stated: Without prejudice to a continuation application, applicants have amended the claims to recite "a transmitter for transmitting data over the first optical fiber, the transmitter having a laser, and a modulator, and a controller receiving input data and controlling the modulator as a function of the input data, the transmitter transmitting optical signals for telecommunication as a function of the input data" and "an energy level detector" to measure an energy level of the transmitted optical signals. A reasonable reading of this passage in the context of the claim language, is that "the transmitted optical signals" are the signals being received by the receiver (having been transmitted elsewhere), not the signals being transmitted by the received transmitter. Case 2:16-cv-1302 Order dated December 5, 2017 at 40.

With respect to the claim phrase "receiver":

• One skilled in the art will recognize that the precise components that make up a receiver will differ, depending upon the types of modulation that are used and upon the choices made by the designer of the receiver. Lebby Decl. ¶ 37.

With respect to the phrase "energy level detector including a threshold" / "energy level detector includes a plurality of thresholds" / "energy level detector including a threshold":

• Each patent teaches that an exemplary energy level detector in Figure 3 has "a preferred analog implementation, with other implementation circuits possible." Lebby Decl. ¶ 35.

With respect to the term "phase modulate" / "phase modulator":

- Amplitude modulation is something more than merely altering amplitude. Case No. 2:16-cv-1302, Order dated June 21, 2018.
- "Modulation of a wave' refers to changing a wave in order to represent data." Case No. 2:16-cv-1302, Order dated June 21, 2018.
- Modulation is the process of encoding the data that is to be communicated in the light wave, by changing one or more of the characteristics of the light wave as a representation of the data.
 Lebby Decl. p 24.
- "Amplitude modulation (amplitude-shift keying (ASK)) works by modulating the amplitude of the wave depending on the binary electrical data signal. With amplitude modulation, the power of the signal can jump between, e.g., 100% (maximum light) and 0% (no light) depending on the bit being transmitted."). Case No. 2:16-cv-1302, Order dated June 21, 2018.
- As a matter of basic physics and as one skilled in the art would recognize, if the power of a light wave alters, so does its amplitude. Lebby Decl. ¶ 29.

The asserted patents refer to a "phase-modulated mode," where "the amplitude of the optical signal is constant," i.e. where phase modulation and only phase modulation is used, but in the same paragraph these patents also expressly state that other forms of modulation can be used. ('898 patent col. 4.) The asserted patents expressly contemplate that the amplitude as well as the phase of the optical signal can be modified. For example, Figure 2 of the '327, '511, and '898 patents each show a controller 18 that is connected to a laser 12 and "modulator" or "phase modulator" 16. The controller controls the modulator and also controls the power output of the laser. Lebby Decl. ¶ 29.

Dated: February 21, 2020

Respectfully submitted, RUSS AUGUST & KABAT

By: /s/ Paul A. Kroeger

Marc A. Fenster Reza Mirzaie Paul A. Kroeger Neil A. Rubin

Attorneys for Plaintiff
OYSTER OPTICS, LLC

Attestation of Concurrence

I hereby attest that concurrence in the filing of the document has been obtained from each of the other signatories, which shall serve in lieu of their signatures on the document.

/s/ Paul A. Kroeger Paul A. Kroeger

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